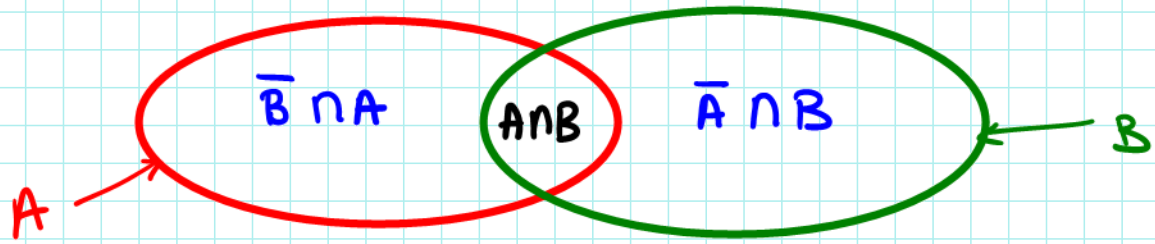


$$p(A \cap \bar{B}) = p(A) - p(A \cap B)$$

$$p(\bar{A} \cap B) = p(B) - p(A \cap B)$$

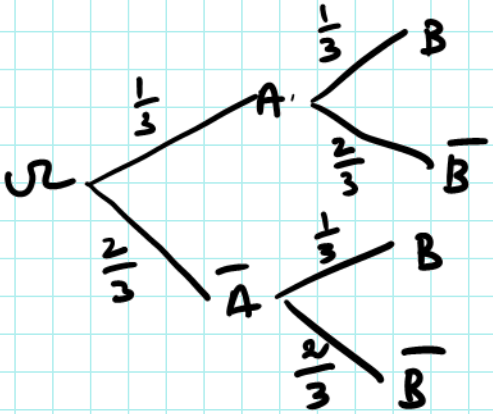
$$p(A \cup B) = p(A \cap \bar{B}) + p(A \cap B) + p(\bar{A} \cap B)$$

$$= p(A) - p(A \cap B) + p(A \cap B) + p(B) - p(A \cap B)$$

Donc $$p(A \cup B) = p(A) + p(B) - p(A \cap B)$$

Si A et B sont incompatibles alors $p(A \cup B) = p(A) + p(B)$

A et B sont independantes $\Leftrightarrow$ $p(A \cap B) = p(A) \times p(B)$



$p(B/A) = p(B)$

- $p(A) = \frac{1}{3}$
- $p(A \cap B) = \frac{1}{3} \times \frac{1}{3} = \frac{1}{9}$
- $p(B) = p(A \cap B) + p(\bar{A} \cap B)$
  $= \frac{1}{9} + \frac{2}{9} = \frac{1}{3}$

$p(A) \times p(B) = \frac{1}{9} = p(A \cap B)$

Donc A et B sont independants.

Qarray.tn-Agra Blech-Qarray.tn